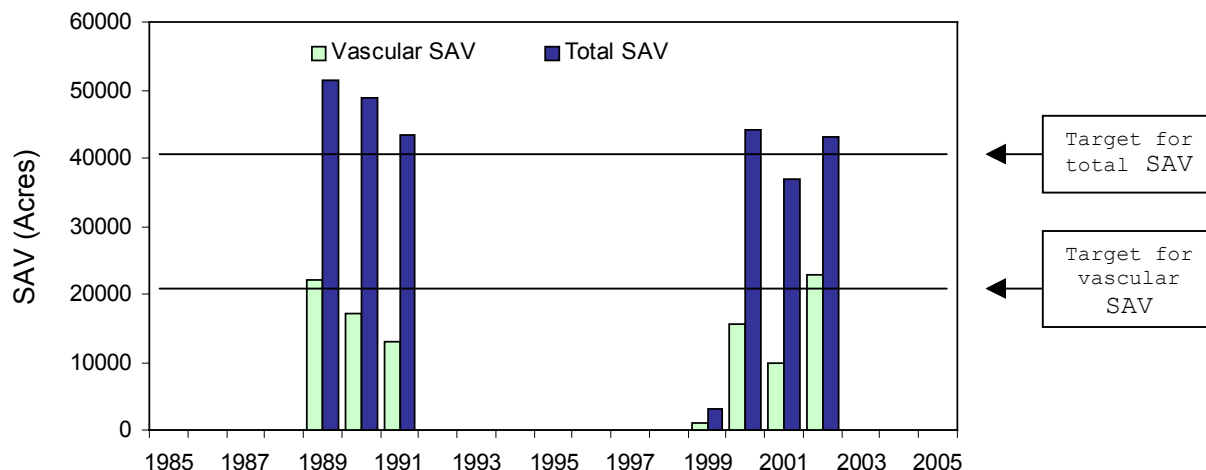

Submerged Aquatic Vegetation Report Card for the Lake Okeechobee Protection Program (LOPP)

LOPP Target: The restoration target is to sustain at least 40,000 total acres of submerged aquatic vegetation (SAV) around the north, west, and south shoreline of the lake, with at least 20,000 acres contributed by vascular plants (in particular eelgrass, peppergrass, and southern naiad).

Significance and Background: Submerged vegetation plays a critical role in stabilizing sediments, supporting attached algae that removes phosphorus from the water, and providing critical habitat for fish, wading birds, and other wildlife. Vascular plants provide the most valuable habitat, while *Chara*, a macro-alga that is common in this and other shallow eutrophic lakes, serves to stabilize sediments but is not as useful for wildlife. Shoreline areas of Lake Okeechobee have supported a large acreage of submerged vascular plants in years with moderate to low water levels, but the acreage has been reduced to near zero following multiple years with very high water. A reduction in the occurrence of high water levels under LOPP and CERP is expected to cause widespread increases in the submerged aquatic vegetation in Lake Okeechobee.

Recent Status and Trends: When spatial extent of the submerged aquatic vegetation was measured just after a period of low lake stage in 1989-91, between 43,000 and 51,000 total acres were found. Between 13,000 and 22,000 acres were due to vascular plants, with the remainder due to *Chara*. Submerged vegetation was not sampled between 1991 and 1997. In 1998, after many years of high lake stage, a rough estimate by the Florida Fish and Wildlife Conservation Commission indicated that only 3,000 acres of total submerged vegetation remained in the lake. A detailed survey by the SFWMD in August 2000, after a managed lake recession, indicated that the community had recovered to 44,000 total acres, with 16,000 acres due to vascular plants. In September 2001, after a severe drought and record low lake stage, there was 37,000 total acres of submerged plants, and 10,000 acres of vascular plants. In July 2002, the spatial extent of submerged vegetation was 43,000 acres, with 23,000 acres of vascular plants (primarily *Hydrilla*, eelgrass, coontail, southern naiad, and peppergrass).



Restoration Actions / Expected Response: The two CERP / LOPP projects that are expected to substantially affect water levels in the Lake, and hence, the biomass and spatial extent of SAV, are the regional ASR and north-of-lake reservoir projects. Regional ASR will account for most of the improvements in lake hydro-pattern (based on hydrologic model results). Since regional ASR is not scheduled for completion until after 2015, large-scale lasting improvements in SAV may not occur for some time. Until then, however, limited benefits to the SAV might be attained by adaptive management of water levels in the lake, within the constraints of the existing regional infrastructure and competing demands for water.